At A Glance

The GMSEC Environment Diagnostic Tool provides a visual representation of a GMSEC data system.

Features

- Visual notification of component, node, or bus failure

- Animation of spacecraft pass, administrator paging, and bus failover

- System, mission, facility, and bus views

- Configurable to user preferences

Benefits

- Provides quick overview of status of system

- Displays demonstration scenarios

- Intended to run as application or through a web portal

NASA's GMSEC Environment Diagnostic Analysis Tool

Summary

The GMSEC Environment Diagnostic Tool (GEDAT) provides a visual representation of the GMSEC environment. The display shows numerous network components performing message-based publish/subscribe communications via one or more GMSEC message buses. The display is intended to be a common software application capable of displaying data system activity at any level within the network.
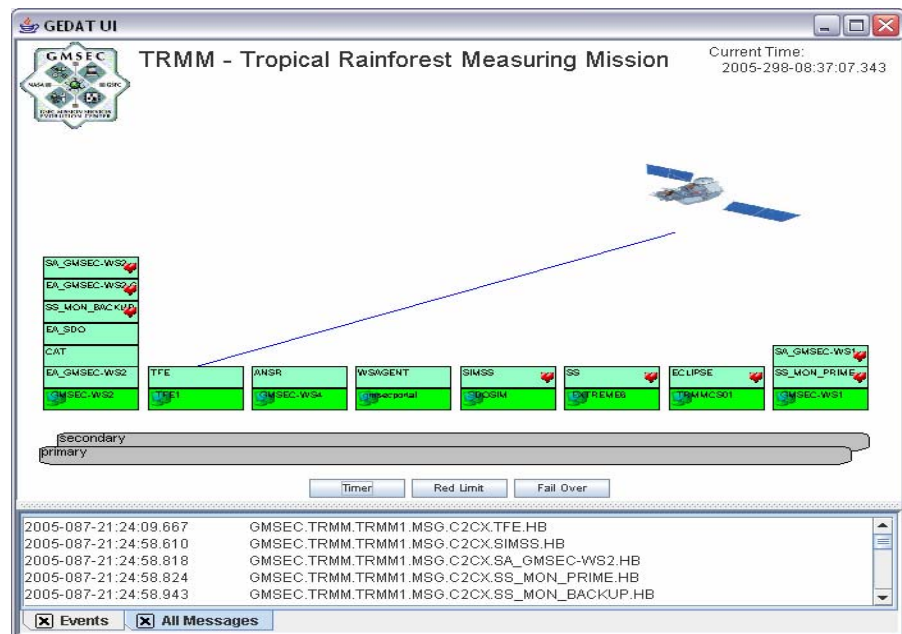
Screen Shot of the GMSEC Environment Diagnostic Tool

Implementation

The GEDAT display utilizes Java2D technology to display essential information about the status of systems, subsystems and processes that make up the ground system support system for spacecraft operations. The GMSEC architecture which forms the basis of the communications layer uses standard interfaces and protocols to provide dynamic and flexible interactions and communications among components. Either a configuration file or messages published populates the display to depict each components status connected to the message bus. Currently, the components are grouped by facility. Eventually, the components can be grouped and displayed by NASA Center, by Mission, or by those components participating in a specific mission at a selected location. Additionally, the GEDAT display will provide graphic depictions of key events like satellite passes, down-link activity, ,warning conditions, and bus failovers.

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